Indiana Department of Environmental Management
Office of Water Quality
Wetlands Section

Publication Date:
August 8, 2016

Closing Date:
August 29, 2016

PUBLIC NOTICE

IDEM ID Number:
2016-254-43-MBS-A

Corps of Engineers ID Number:
Unknown

To all interested parties:

This letter shall serve as a formal notice of the receipt of an application for **Section 401 Water Quality Certification** by the Indiana Department of Environmental Management (IDEM). The purpose of the notice is to inform the public of active applications submitted for water quality certification under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and to solicit comments and information on any impacts to water quality related to the proposed project. IDEM will evaluate whether the project complies with Indiana's water quality standards as set forth at 327 IAC 2.

1. Applicant: Chapman Lakes Foundation, Inc.
PO Box 776
Warsaw, Indiana 46581

2. Agent: S&L Environmental Group, Inc.
15504 CR 42
Goshen, Indiana 46528

3. Project location: Section 25, Township 33 North, Range 6 East, Leesburg USGS Quad, Tippecanoe8 Digit HUC-05120106-
The project Site is located SE of the Autumn Tr .and Greystone Dr. intersection in Warsaw, Kosciusko County

4. Affected waterbody: Crooked Creek

5. Project Description: The applicant is applying for Section 401 WQC to impact a total of 543 linear feet of stream along numerous areas of Crooked Creek. The proposed activity is associated with repairs to failing areas of a previously approved 2000 linear foot stabilization project (IDEM Project Number 2002-658-43-JWR-A). Specific repairs will consist of placing stone toe protection along a total of 247 linear feet of bank, improving existing stone cribs and lifts in numerous areas along 236 linear feet of bank and placing riffle-grade control along 60 linear feet of the channel. For additional information, please visit the webpage at http://www.in.gov/idem/6396.htm.

Comment period: Any person or entity who wishes to submit comments or information relevant to the aforementioned project may do so by the closing date noted above. Only comments or information related to water quality or potential impacts of the project on water quality can be considered by IDEM in the water quality certification review process.

Public Hearing: Any person may submit a written request that a public hearing be held to consider issues related to water quality in connection with the project detailed in this notice. The request for a hearing should be submitted within the comment period to be considered timely. The request should also state the reason for the public hearing as specifically as possible to assist IDEM in determining whether a public hearing is warranted.

Questions? Additional information may be obtained from Mr. Matthew Smedley, Project Manager, by phone at 317-234-5647 or by e-mail at msmedley@idem.in.gov. Please address all correspondence to the project manager and reference the IDEM project identification number listed on this notice. Indicate if you wish to receive a copy of IDEM's final decision. Written comments and inquiries may be forwarded to -

Indiana Department of Environmental Management
100 North Senate Avenue
MC65-42 WQS IGCN 1255
Indianapolis, Indiana 46204-2251 FAX: 317/232-8406

CROOKED CREEK STREAM BANK RESTORATION

VICINITY LOCATION MAP

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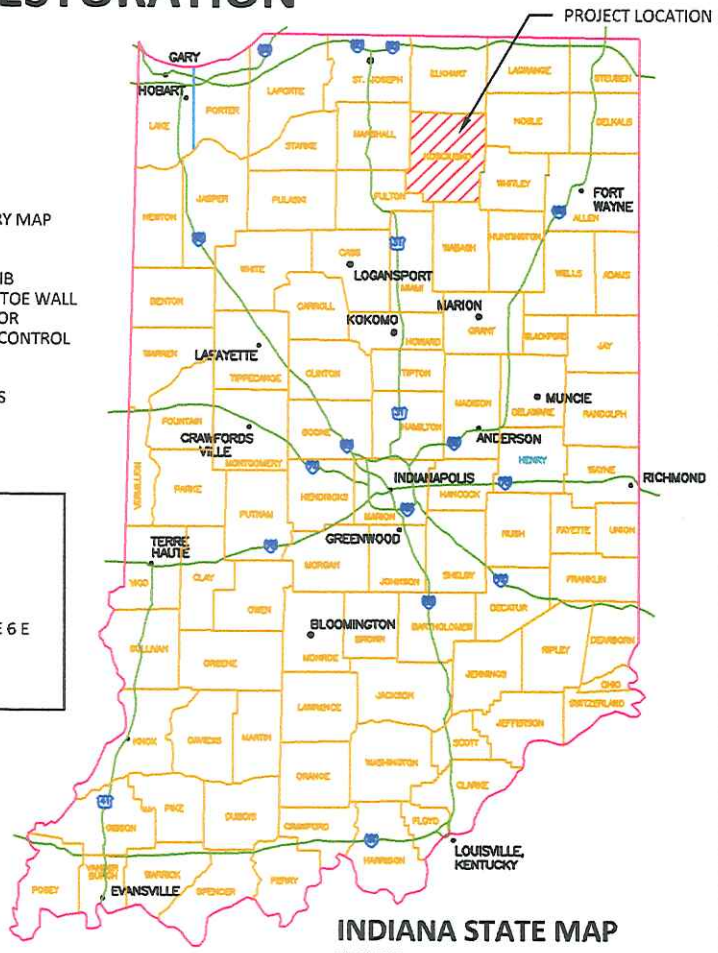
PROJECT LOCATION:

CHAPMAN LAKE
PLAIN TOWNSHIP
KOSCIUSKO COUNTY

SECTION 35, TOWNSHIP 33 N, RANGE 6 E
41°17'14.52" N 85°46'18.88" W
HYDROLOGIC UNIT CODE -
12-051201060202

FOR:
CHAPMAN LAKES FOUNDATION, INC.
P.O. BOX 776, WARSAW, INDIANA 46581

IDNR - DIVISION OF FISH AND WILDLIFE LAKE AND RIVER ENHANCEMENT
1353 SOUTH GOVERNORS DRIVE, COLUMBIA CITY, INDIANA 4672
C/O DOUG NUSBAUM



INDIANA STATE MAP

NOT TO SCALE

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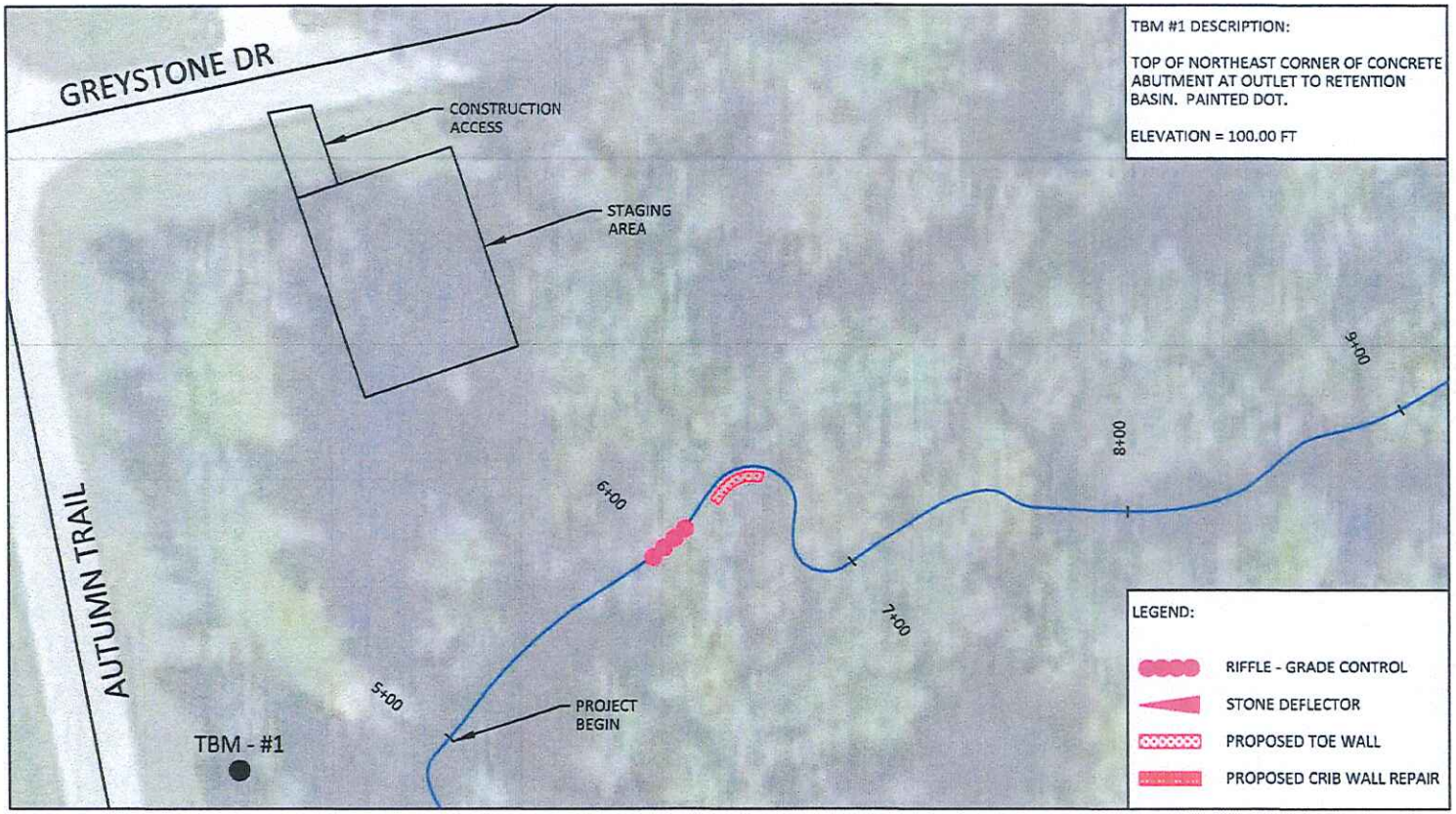
15504 COUNTY ROAD 42
GOSHEN, INDIANA 46528

CROOKED CREEK STREAM BANK RESTORATION

TITLE SHEET

VICINITY LOCATION MAP

		REVISION NUMBER	REVISION DATE		
DESIGN BY:	WSS			PROJECT NO.:	
DRAWN BY:	JWS	.	.	DATE: 4.28.2016	PAGE NO. 1
CHECKED BY:	WSS	.	.	HORIZONTAL SCALE: .	of
APPROVED BY:	WSS	.	.	VERTICAL SCALE: .	25



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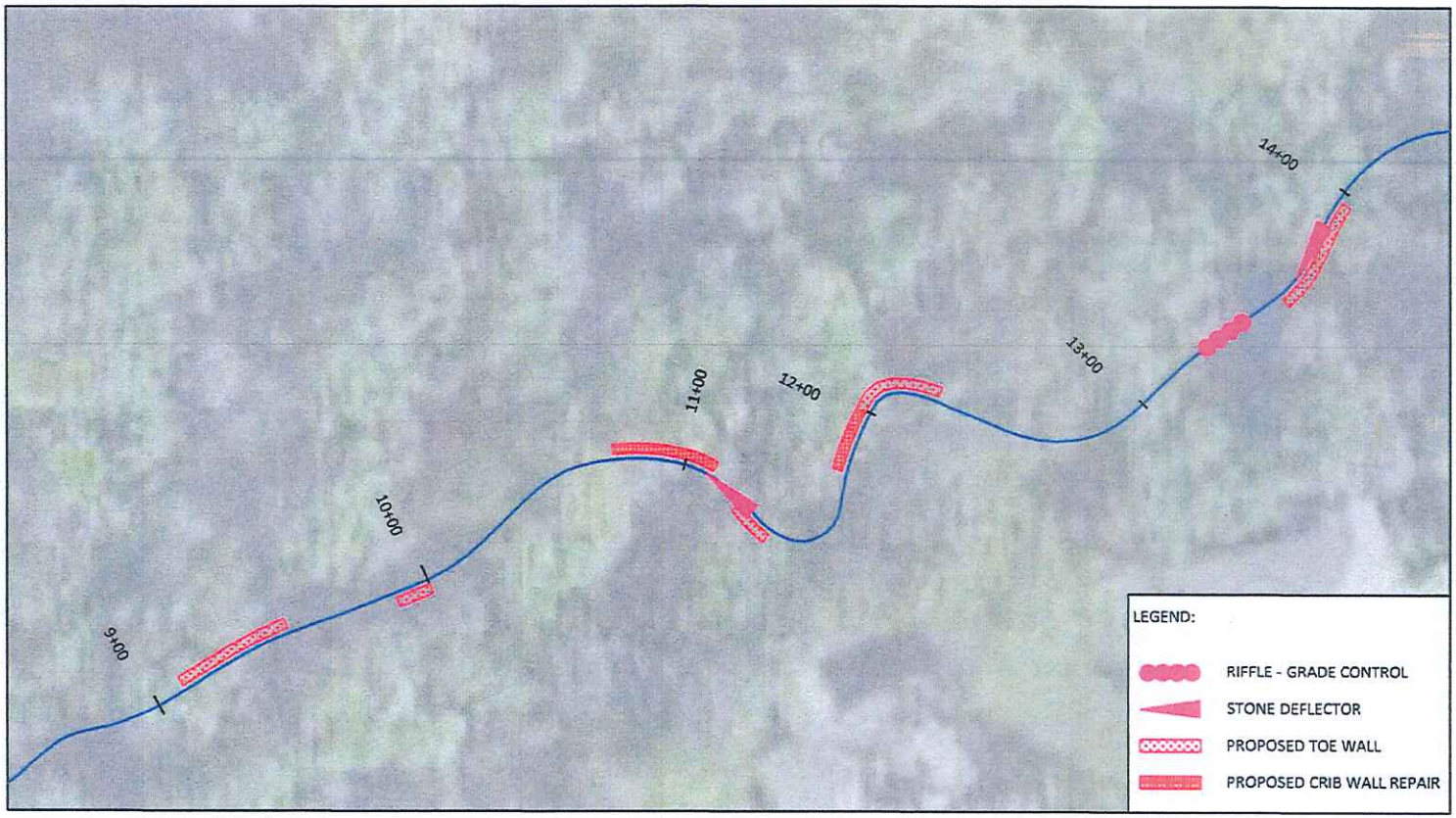
CROOKED CREEK STREAM BANK RESTORATION

CONSTRUCTION PLAN VIEW STATION 5+00 TO 9+00

DESIGN BY:	WSS	REVISION NUMBER	REVISION DATE	PROJECT NO.:	PAGE NO.
DRAWN BY:	JWS	1	5.16.16	DATE: 4.28.2016	8 of 25
CHECKED BY:	WSS	.	.	HORIZONTAL SCALE:	
APPROVED BY:	WSS	.	.	VERTICAL SCALE:	



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CROOKED CREEK STREAM
BANK RESTORATION

CONSTRUCTION PLAN VIEW
STATION 9+00 TO 14+00

		REVISION NUMBER	REVISION DATE
DESIGN BY:	WSS		
DRAWN BY:	JWS	1	6.16.16
CHECKED BY:	WSS	.	.
APPROVED BY:	WSS	.	.

PROJECT NO.: .
DATE: 4.28.2016
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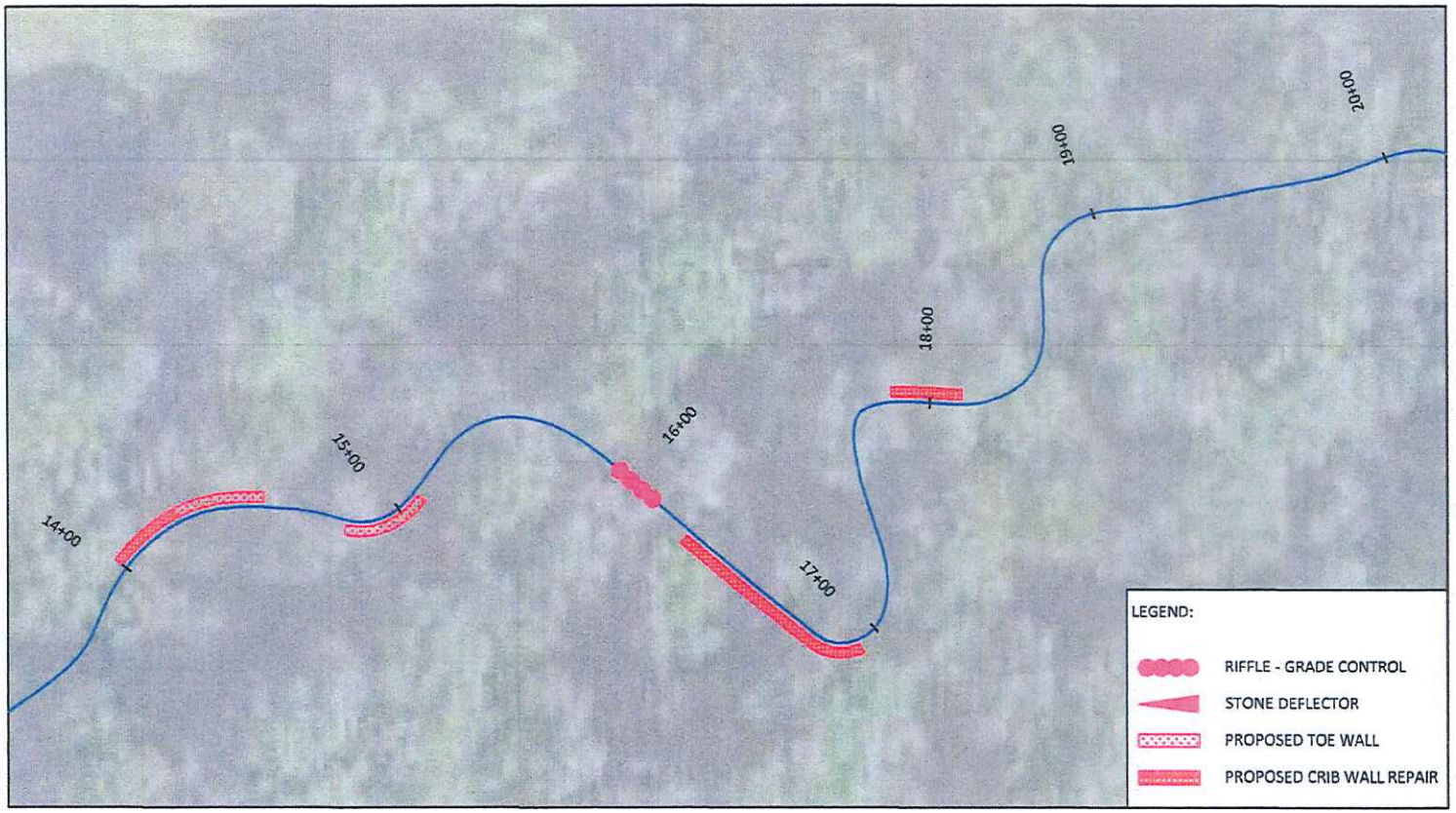

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CROOKED CREEK STREAM
BANK RESTORATION

CONSTRUCTION PLAN VIEW
STATION 14+00 TO 20+00

DESIGN BY:	WSS	REVISION NUMBER	REVISION DATE	PROJECT NO.:	.
DRAWN BY:	JWS	1	6.16.16	DATE:	4.28.2016
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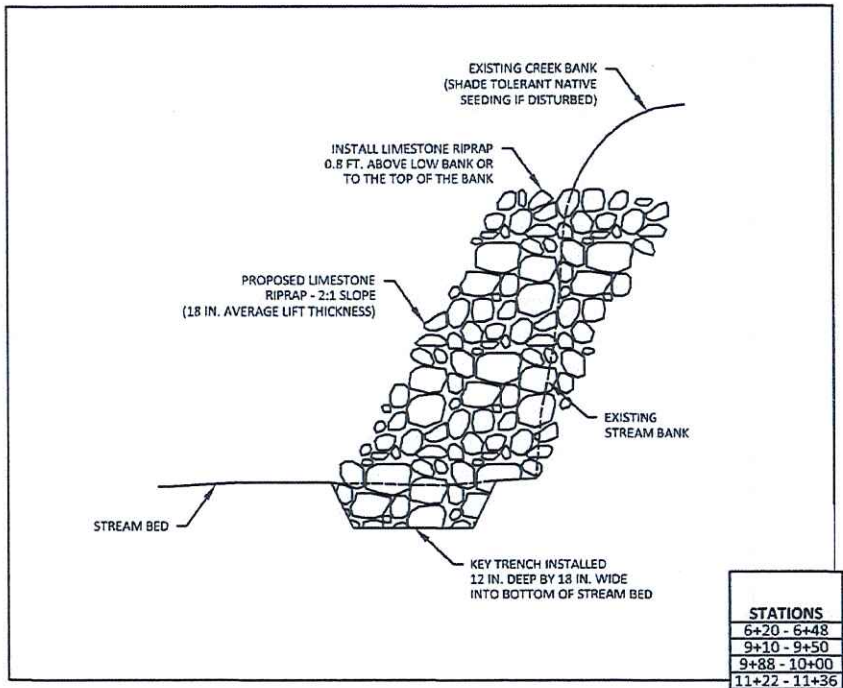
APPROVED BY:	WSS	.	.	VERTICAL SCALE:	.

PROPOSED CONSTRUCTION



PROPOSED NOTES:

1. LIMESTONE RIPRAP SIZE -> D_{50} - 9"

STATIONS	OHWM ELEV. (FT)	LOW BANK ELEV. (FT)	STREAM BOTTOM ELEV. (FT)	PROPOSED STONE ELEV. (FT)	PROPOSED STONE HEIGHT (FT)	**VOLUME STONE (CYS) BELOW OHWM	**VOLUME STONE (CYS) TOTAL PROPOSED
6+20 - 6+48	99.50	100.60	98.10	100.80	2.7	7.5	11.5
9+10 - 9+50	102.50	103.50	101.40	104.30	2.9	9.3	17.3
9+88 - 10+00	103.20	103.50	102.50	104.30	1.8	2.3	3.7
11+22 - 11+36	105.50	105.90	104.40	106.70	2.3	3.3	5.1
11+96 - 12+25	105.90	106.40	104.90	107.20	2.3	6.5	10.7
13+54 - 13+93	107.70	108.40	106.60	108.40	1.8	9.1	12.1
14+25 - 14+55	107.90	108.30	106.90	109.10	2.2	6.7	10.7
14+80 - 15+08	108.00	108.30	107.10	109.10	2.0	5.9	9.4
20+50 - 20+77	113.60	114.20	112.50	115.00	2.5	6.3	10.5
247 FT						56.9	91.0

**STONE QUANTITIES INCLUDE ADDITIONAL 1.0 FT DEPTH FOR KEY TRENCH

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CROOKED CREEK
STREAM BANK RESTORATION

TYPICAL DETAIL

LIMESTONE RIPRAP
TOE WALL

DESIGN BY:	WSS	REVISION NUMBER	REVISION DATE	PROJECT NO.:	.
DRAWN BY:	JWS	1	6.16.16	DATE:	4.28.2016
CHECKED BY:	WSS	.	.	HORIZONTAL SCALE:	.
APPROVED BY:	WSS	.	.	VERTICAL SCALE:	.

CONTRUCTION NOTES

1. No construction activities will be performed from April 1 through June 30.
2. In channel disturbance will be minimized.
3. Utilize designated "Access Point" as identified on "Plan View Map".
4. All underground utilities will be notified 72 hours prior to beginning and excavation.
5. Notify Greg Hall, President of Chapman Lakes Foundation, Inc. one week prior to anticipated start date.
6. All removed downed trees within the stream shall be secured between existing standing trees or removed to an upland site.
7. Type and size of stone will be as identified on the cross-section graphics.
8. All disturbed areas within the project limits, including access and staging areas will be repaired to preconstruction conditions.
9. Previously failed bio-engineering practices utilizing logs and re-rod will be removed from the project limits or secured to stream bed if the logs have not deteriorated.
10. Equipment travel on the north side of the creek will be limited to the three identified temporary crossing areas as shown on Page 7.

VOLUME OF FILL SUMMARY

	Total Length	Volume Fill Below OHWM (cys)	Total Volume Fill (cys)
Repair of Existing Log Crib Wall	236 ft	29.3 (0.12 cys/ft)	61.1 (0.26 cys/ft)
Natural Stone Toe Wall	247 ft	56.9 (0.23 cys/ft)	91.0 (0.37 cys/ft)
Riffle – Grade Control	60 ft	14.1 (0.24 cys/ft)	14.1 (0.24 cys/ft)
TOTAL OF ALL TREATMENTS	**543 ft**	**100.3 (0.18 cys/ft)**	**166.2 (0.31 cys/ft)**

Shrub Planting

Shrubs will be planted into the stream bank slope where stabilization methods are installed. The purpose of the shrubs will be for the roots to provide additional bank stability by holding the soil together. It will be very difficult to establish shrubs in a fully shaded setting but worth a try. Shrubs will be planted on 4-5 ft. spacing. The recommended shrubs to plant in a fully shaded area includes:

Spicebush – Spicebush is the predominate existing shrub, but it may be difficult to find a nursery who provides root stock.

Buttonbush and Viburnum (Maple Leaf) will be the alternative species.

Calculations of Stone Volume and Impacted Area Below OHWM

Station	Dimensions (ft)	Cu Yds Volume	Area Impacted Sq. Ft.
5+90 – 6+10	20L X 0.5D X 14W	5.2	280
	1.5D X 2.0W X 14L	1.5	
6+20 – 6+48	28L X 1.5D X 4.8 W	7.5	134
9+10 – 9 +50	40L X 1.5D X 4.2 W	9.3	168
9+88 – 10+00	12L X 1.5D X 3.4W	2.3	44
10+75 – 11+10	35L X 2.0D X 1.8W	4.7	63
11+22 – 11+36	14L X 1.5D X 4.2W	3.3	59
11+96 – 12+25	29L X 1.5 D X 4.0W	6.5	116
13+25 – 13+35	10L X 0.25D X 14W	1.3	140
	1.5D X 2.0W X 14 L	1.5 (Key)	
13+54 – 13+93	39L X 1.5D X 4.2 W	9.1	164
14+25 – 14+55	30L X 1.5D X 4.0 W	6.7	120
14+80 – 15+08	28L X 1.5D X 3.8W	5.9	106
16+00 – 16+16	16L X 0.4D X 14W	3.3	224
	1.5D X 2.0W X 14L	1.3 (Key)	
16+24 – 16+92	68L X 2.0D X 2.1W	10.6	143
17+87 – 18+10	23L X 2.0D X 1.8W	3.1	41
19+60 – 20+24	64L X 2.0D X 2.3W	10.9	147
20+50 – 20+77	27L X 1.5D X 4.2W	6.3	113
543 LF		**100.3**	**2062**
			0.05 Ac.

CROOKED CREEK – EXISTING PICTURES

Figure 1 - Station 20+00 looking upstream. Top log missing and bottom logs nearly decomposed and falling apart. High stream flow is beginning to erode the soil behind the logs.

Figure 2 - Station 18+00 looking upstream. Log Crib Wall now missing except for a small log and some stone. Sandy loam soil with high stream flow velocity will continue to erode the banks, even with the root mass from the trees.

Figure 3 - Station 15+00 looking downstream. Log Crib Wall has decomposed or washed away. Sandy loam banks are beginning to erode with existing protection.

Figure 4 - Station 17+00 Log Crib Wall with encapsulated lifts. Lots missing to left of picture and remaining logs unstable and have limited life left. When the logs break loose the entire bank will slide into the stream.

Figure 5 - Note steel rods remaining after log crib decomposed and fell apart. The steel rods are numerous throughout the stream bank.